

CHEMICAL TREATMENT TO RETARD DIFFUSION IN A SEMICONDUCTOR OVERLAYER

Abstract

The present invention provides a method for retarding the diffusion of dopants from a first material layer (typically a semiconductor) into an overlayer or vice versa. In the method of the present invention, diffusion of dopants from the first semiconductor into the overlayer or vice versa is retarded by forming a monolayer comprising carbon and oxygen between the two layers. The monolayer is formed in the present invention utilizing a chemical pretreatment process in which a solution including iodine and an alcohol such as methanol is employed.